

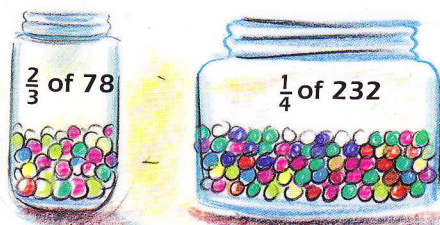
# Marble Marvels

## Activity

Daniel is doing jobs for his grandma. Grandma knows that Daniel enjoys working out maths problems and playing marbles, so she decides to combine the two.

Daniel, if you do all the jobs, you can have  $\frac{2}{3}$  of the marbles in the jar of 78 marbles or  $\frac{1}{4}$  of the marbles in the jar of 232 marbles.

1. Which jar should Daniel choose to get the most marbles? Record how you worked it out.



2. Can you think of another way to work out this problem?

3. Which jar in each pair below contains the most marbles:

- a.  $\frac{3}{4}$  of 56 or  $\frac{1}{2}$  of 88?      b.  $\frac{1}{3}$  of 69 or  $\frac{1}{4}$  of 96?  
c.  $\frac{2}{5}$  of 85 or  $\frac{3}{5}$  of 75?      d.  $\frac{5}{8}$  of 96 or  $\frac{3}{5}$  of 100?  
e.  $\frac{3}{4}$  of 104 or  $\frac{2}{3}$  of 108?

4. The following weekend, Daniel's grandma has two new jars of marbles. One jar has 63 marbles in it, and the other has 42 marbles in it. Again, Grandma tells Daniel that he can have a fraction of marbles from one of the jars or a different fraction of marbles from the other jar.

Daniel thinks for a bit and then says that no matter which jar he chooses, the number of marbles he would get will be the same.

What fractions do you think might be written on each jar?